

Human Factors in VVSG, Ver. 1: Accessibility, Usability, and Privacy

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Overview

- Goals for VVSG version 1
- Changes from March 9, 2005 VVSG draft
- Decision and Issues
- Questions and Discussion

HFP Goals for VVSG Version 1

- Focused primarily on the voting equipment
- Comprehensive accessibility requirements
 - If not readily achievable, at least point the way to future requirements in VVSG Version 2
 - should → shall
 - Evidence of summative usability testing
- Usability requirements moved from appendix
 - Mainly based on existing guidelines
 - Evidence of summative usability testing
- Privacy requirements focused on the voter-equipment interface
- VVSG Version 2 will have substantial changes and expansion

Changes from the March 9th Draft

- Heavy editing of accessibility section
 - Includes addressing comments from the Access Board
- Usability requirements based on March 9, 2005 outline
 - Minimal design standards
- Small privacy section added; gleaned from existing requirements
 - Configuration
 - No identifying accessibility features on vote record
 - Preserving privacy in absentee ballot handling

Some Specific Changes

- Functional equivalence of all alternative formats
- Alternative language is a separate subsection
- Specifically incorporated ADS and ABA guidelines
- Re-formulated reach envelope
- Automatic “universal reset”
- Recommendations
 - Audio-video synchronization
 - Ability to control rate of speech
 - Recorded speech
 - Skip navigation for referenda and contests
 - Accessible verification for those who are blind
 - Sip-n-puff

Decisions and Issues

- Organized accessibility requirements by disability
- Which features are limited to Accessible Voting Station (AccVS) and which apply to all?
 - Audio interface, AccVS
 - Control of font size, all DREs
 - Redundancy of color coding, all VS
 - For low vision: minimally 2 font sizes, but what about VVPAT?
- All accessibility and usability requirements apply to VVPAT
- Shalls vs. Shoulds
 - Right balance, which ones move to “shalls”?
 - “Omit no should” philosophy?

Decisions and Issues

- Require initialization of voter-settable attributes
 - Vs. recommendation?
 - What about accessibility set automatically on startup?
- Did not include anthropometric requirements
 - Needs more research, Mil. Standard vs. Caesar data and how to apply it correctly
- No guidance specifically for cognitive disabilities
- Require vendors to perform targeted summative usability tests, but no benchmarks in V1
- Minimal usability design standards
 - Interim requirements pending the development of performance requirements
 - Benefit of complex standards difficult to prove or measure

Questions and Discussion

- HFP in VVSG Version 2...